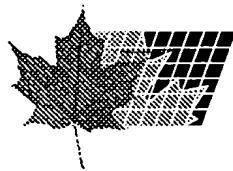


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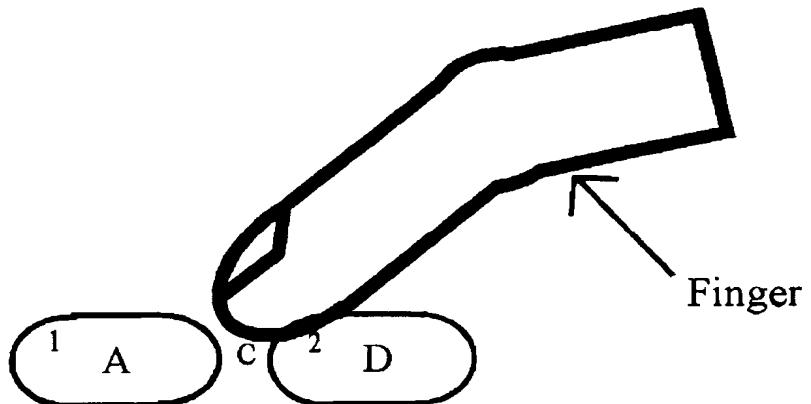
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(54) MÉTHODE D'ENTRÉE DE TEXTE AU CLAVIER SUR UN PETIT  
PRÉT A TOUT

(54) SMALL INFORMATION APPLIANCE TEXT INPUT KEYPAD  
METHOD



Industrie Canada Industry Canada

## **Small Information Appliance Text Input Keypad Method**

### **Description:**

This Invention relates to the ability to enter text information on small appliances that have a limited number of keypads and are used for information and communication tasks.

Many innovations have been made for the purpose of text information entry for high tech gadgets. These high tech information gadgets are mostly being developed for portability and ease of mobility. Since normal keyboards are quite large, text input with limited spacing is a necessity to achieve this development.

These innovations in text entry are related to voice recognition, text recognition, and other mechanical input devices.

Voice recognition which requires speaking into a microphone is very space saving but it is also limited in accuracy , prevents privacy since the voice can be heard by others in close vicinity, it may also disturb the others and any surrounding noise prevents recognition. Text recognition includes optical character recognition from objects such as a stylus' writings generated on a small section of an optical reading device but once more this method is limited in accuracy and is subjugated to each individual's scribbling patterns.

This invention is based on an abandoned Patent which is dated Aug. 23, 1983 US Patent # 4,400,593 and titled "Key Array". It was probably abandoned because the inventor could not find any sufficiently suitable use for it. Therefore this inventions provides a new and useful application from an older method. And it has still gone unnoticed even by a huge high tech industry dedicated solely to the purpose of providing small and portable information and communication appliances, notably: wireless phones, wireless text messaging and Internet units, remote control television Internet interface devices, personal digital assistant devices (PDA devices) and many other similar tasks including wireline Internet visual display phones.

This method is complementary to small gadgets such as wireless phones compact keypads since it makes use of closely located adjacent keys: by simultaneously pressing two closely located horizontal or vertical adjacent phone keys with one finger, a new key symbol is generated on the units' display.

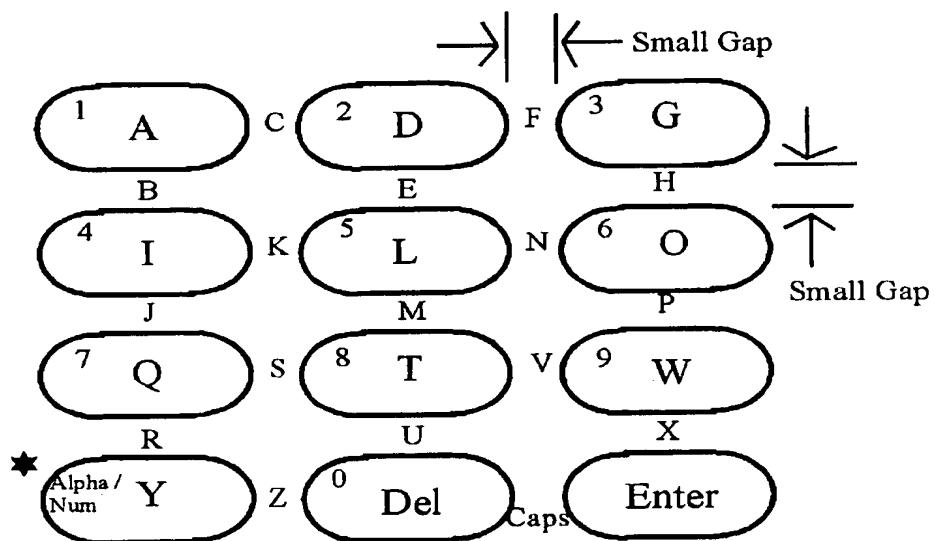
These keys may also be diagonal keys although it would start to loose its appeal for ease of use. The keys may also be rectangular, oblong, square, or rotated ninety degrees to prevent less interference from diagonal or opposing plane keys.

Almost every wireless phone company is presently using Tegic Communications' patented "Predictive T9 Text Input" to simplify typing on the phone's keypad (US Patent # 5,959541 and US Patent # 5,818,437 : "Reduced keyboard disambiguating computer").

Tegic's method makes use of the normal three alphabet letters on every phone key and tries to predict what was typed by the combinations of phone keys that are pressed. As it is, because Tegic's method is predictive: it is therefore very error prone and requires more intensive data processing. Also the user can't know what he's typing on the keypad until he is completely finished the word or phrase and the prediction has taken place.

Drawing in figure 1 demonstrates a possible configuration of keys and possible symbol generation from the key presses for text input. Through the combination of these twelve keys, twenty seven different text symbols can be generated: twelve normal key presses plus fifteen more from simultaneous horizontal or vertical key presses. With one key press generating a toggle function twelve plus possibly fifteen more numeric and functional symbols can also be generated. The method, placement and uncluttered number of symbols used is important since it provides an essential appeal and ease of use for its operator who may also have a wide finger. All together 54 different key symbols/ functions can be generated from a combination of only twelve keys.

Drawings in figure 2 and figure 3 demonstrate the simultaneous horizontal and vertical key presses respectively.

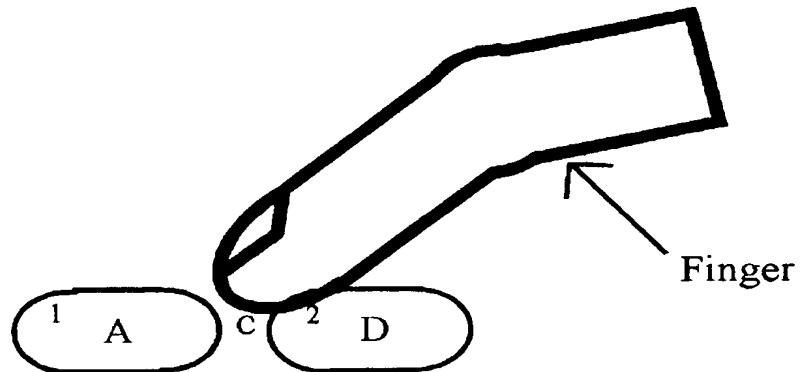
**Figure 1:****SMALL INFORMATION APPLIANCE TEXT INPUT KEYPAD METHOD**

★ Alphabet / Numeric Toggle

In Alphabet Mode = 29 Keys

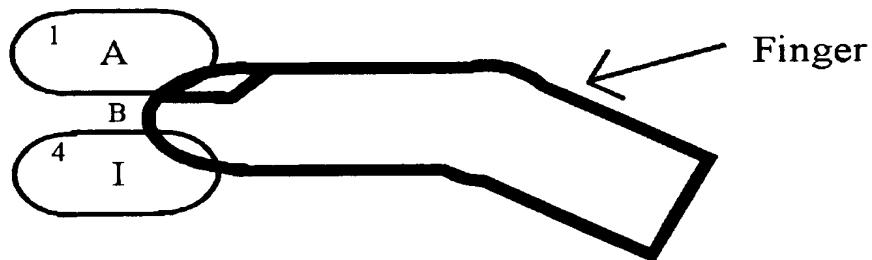
In Numeric Mode = 12 Keys (or +17 more = 29 Keys)

Figure 2:  
Simultaneous key press of two adjacent horizontal keys



★ In this example the "C" symbol is generated

Figure 3:  
Simultaneous key press of two adjacent vertical keys



★ In this example the "B" symbol is generated